

Appl. No. 09/830,730
Amendment dated February 23, 2004
Reply to Non-Final Office Action of October 22, 2003

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-16. (canceled)

17. (previously presented): A process for the production of soluble polymer granules suitable as an additive in detergents and/or cleaning compositions, comprising the steps of simultaneously granulating and drying, in a fluidized bed dryer having a diffusor plate, a water-based preparation comprising at least 30% by weight of one or more soluble polymers, in which dryer one or more air inlets above the diffusor plate produce an eddy flow in the bed about the vertical axis of the dryer.

18. (previously presented): The process of claim 17, carried out in a round fluidized bed dryer having an additional air supply system disposed above the diffusor plate, said air supply system having at least two air injection tubes arranged at a uniform distance apart and at the same level above the diffusor at an angle of incidence α of at least 30° and at most 90°.

19. (previously presented): The process of claim 18, wherein the air injection tubes are situated above the diffusor plate at a maximum of 50% of the resting height of the bed material.

20. (previously presented): The process of claim 19,

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wherein the air injection tubes are situated above the diffusor plate at a maximum of 10% to 30% of the resting height of the bed material.

21. (previously presented): The process of claim 18, wherein the additional air supply system comprises more than two air injection tubes.

22. (previously presented): The process of claim 21, wherein the additional air supply system comprises more than four air injection tubes.

23. (previously presented): The process of claim 18, wherein the angle of incidence of the injection tubes is 30° to 75°.

24. (previously presented): The process of claim 23, wherein the angle of incidence of the injection tubes is 45° to 70°.

25. (previously presented): The process of claim 24, wherein the angle of incidence of the injection tubes is 60°.

26. (previously presented): The process of claim 17, wherein the one or more soluble polymers comprise one or more polymeric polycarboxylates.

27. (previously presented): The process of claim 26, wherein the one or more polymeric polycarboxylates comprise one or more homopolymers or copolymers of acrylic,

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methacrylic, or maleic acid or water-soluble salts of these polymers.

28. (previously presented): The process of claim 27, wherein the one or more polymeric polycarboxylates have a molecular weight of 500 to 100,000 g/mol.

29. (previously presented): The process of claim 17, wherein the one or more soluble polymers comprise one or more homopolymers or copolymers of vinyl pyrrolidone having a molecular weight of 1000 to 200,000 g/mol.

30. (previously presented): The process of claim 29, wherein the one or more homopolymers or copolymers of vinyl pyrrolidone have a molecular weight of 1000 to 100,000 g/mol.

31. (previously presented): The process of claim 17, wherein the water-based preparation comprises one or more dextrins.

32. (previously presented): The process of claim 31, wherein the one or more dextrins are introduced into the dryer in solid form.

33. (previously presented): The process of claim 31, wherein the water-based preparation comprises the one or more dextrins and one or more polymeric polycarboxylates in the form of a homogeneous solution of the two polymers, said solution being sprayed into a granulation chamber in the dryer.

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34. (previously presented): The process of claim 17, wherein one or more inorganic carrier materials are admixed with the water-based preparation.

35. (previously presented): The process of claim 34, wherein the one or more inorganic carrier materials comprise one or more of sodium sulfate, sodium carbonate, or zeolites.

36. (currently amended): Soluble polymer granules suitable as an additive in detergents and/or cleaning compositions, comprising generally spherical granules containing 50% to 95% by weight of one or more soluble polymers, said polymers comprising one or more homopolymers or copolymers of vinyl pyrrolidone having a molecular weight of 1000 to 200,000 g/mol and at least one admixing component.

37. (previously presented): The soluble polymer granules of claim 36, wherein the one or more soluble polymers comprise one or more polymeric polycarboxylates.

38. (previously presented): The soluble polymer granules of claim 37, wherein the one or more polymeric polycarboxylates comprise one or more homopolymers or copolymers of acrylic, methacrylic, or maleic acid or water-soluble salts of these polymers.

39. (previously presented): The soluble polymer granules of claim 38, wherein the one or more polymeric polycarboxylates have a molecular weight of 500 to 100,000

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g/mol.

40. (canceled)

41. (currently amended): The soluble polymer granules of claim 40 36, wherein the one or more homopolymers or copolymers of vinyl pyrrolidone have a molecular weight of 1000 to 100,000 g/mol.

42. (previously presented): The soluble polymer granules of claim 37, comprising one or more dextrins.

43. (previously presented): The soluble polymer granules of claim 42, wherein the weight ratio of dextrin to polymeric polycarboxylate in the granules is 4:1 to 1:2.

44. (previously presented): The soluble polymer granules of claim 36, comprising less than 40% by weight of the at least one admixing component, wherein the at least one admixing component comprises one or more inorganic carrier materials.

45. (previously presented): The soluble polymer granules of claim 44, wherein the one or more inorganic carrier materials comprise sodium sulfate, sodium carbonate, sodium citrate, or zeolites.

46. (previously presented): The soluble polymer granules of claim 44, comprising less than 25% by weight of the at least one admixing component.

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47. (previously presented): The soluble polymer granules of claim 36, comprising 75% to 90% by weight of the one or more soluble polymers.